Crowd-based Place (Names) Information from (Big) Geosocial Data

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What’s in Place Names?

• Names of the places associated with geographic phenomena, significant person, and many other things.
• Place is close to human cognitive factors (knowledge, memories, beliefs).
• People named places collectively or individually using their language and local understanding.
• Place names are socially constructed by people’s lives, identities and communication.
• Nowadays, people become producer and consumer of crowd-based place names information in social media.
Check-in
Check-in
Jelajahi tempat-tempat yang menarik di setiap kota

Nama kota

Amerika Serikat

Lulu's Bakery & Cafe
4.1 ★★★★★ (668)
San Antonio, Texas

Wendy's
Dublin, Ohio

Applebee's Grill & Bar
4.2 ★★★★★ (4533)
Kota New York
Manage how customers view your business.

Take charge of what people see when they search for your business. Google My Business gives you the tools to update your listing, build a website, and engage with your customers from your phone, tablet or computer. Free.
Standardization of Place Names


UNGEGN Asia South-East Division (http://asedivision-ungegn.org/)

National Names Authorities

Discussion forum (the 10th UNCSGN); three new tasks/issues:
- Forum 1 - volunteered geographic information (VGI)/crowd-sourcing
- Forum 2 - definitions for gazetteers and data types
- Forum 3 - general feature types/categories

Working Group on Toponymic Data Files and Gazetteers (https://wiki.gdi-de.org/display/wgtdfg/Working+Group+on+Toponymic+Data+Files+and+Gazetteers+of+UNGEGN)

F1.2 Reliability

Created by Pier-Giorgio Zaccheddu, last modified on Aug 08, 2014

Within this sub-site the reliability issues of using VGI and crowd-sourced data in authoritative products and services shall be discussed. The following questions are to be discussed:

F1.2-Q1: Is the information received considered to be reliable and what are the main methods of quality control?
F1.2-Q2: What types of problems does this VGI data pose to your organisation?
F1.2-Q3: Have you developed any rules for using it?

https://wiki.gdi-de.org/display/wgtdfg/F1.2+Reliability
Standardization of Place Names

<table>
<thead>
<tr>
<th>Influence of Stakeholder</th>
<th>Importance of Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Somewhat influential</td>
<td>Unknown</td>
</tr>
<tr>
<td>Little / No influence</td>
<td>Little / No importance</td>
</tr>
<tr>
<td>Significant influence</td>
<td>Some importance</td>
</tr>
<tr>
<td>Unknown</td>
<td>Significant importance</td>
</tr>
</tbody>
</table>

Source: Analysis Stakeholder Matrix, 2017

Diagram:
- Field Collection
- Office Treatment
- Use and Enrich
- Gazetteer Creation
- Publish/Dissemination
- Evaluation
- Update/Revision

NCG Symposium 2017 | TU Delft, 2 November 2017
Toponym Data Collection by National Names Authority

Collecting place names from the ground, place names collected by interviewing local inhabitants in the entire country, part of topographic mapping projects.

Authoritative and Standardized Geographical Names?

(big) Geosocial Data?
(big) Geosocial Data

WHAT IS BIG DATA?

Data Complexity: Variety and Velocity

Petabytes
- Click stream
- Wikis/blogs

Terabytes
- Advertising
- Mobile
- Collaboration
- eCommerce

Gigabytes
- Payables
- Payroll
- ERP/CRM

Megabytes
- Inventory
- Sales Pipeline
- Web Logs
- Digital Marketing
- Search Marketing
- Recommendations

Big Data
- Log files
- Spatial & GPS coordinates
- Data market feeds
eGov feeds
- Weather
- Text/image

https://blogs.msdn.microsoft.com/data__knowledge__intelligence/2013/02/18/big-data-big-deal/
(big) Geosocial Data


https://www.simplilearn.com/how-facebook-is-using-big-data-article
Place (Names) Information from (big) Geosocial Data

The 10 (+1) Vs of Big Data

#1: Volume
#2: Velocity
#3: Variety
#4: Variability
#5: Veracity
#6: Validity
#7: Vulnerability
#8: Volatility
#9: Visualization
#10: Value
#11: Vague?

Modified from George Firican, 2017

Illustration: Hans Möller, mollers.dk


https://tdwi.org/articles/2017/02/08/10-vs-of-big-data.aspx
Place (Names) Information from (big) Geosocial Data

• Flickr

• Twitter, OpenStreetMap (OSM) Data, Geonames, DBPedia

• Crowd-sourced OSM, Wikimapia, Geonames, Machine Learning (SVM)
Predicting the quality of new contributors to the Facebook crowdsourcing system

Julian M. Eisenschlos
Facebook
Menlo Park, CA 94025
julianiseon@fb.com

Abstract

We are interested in improving the quality and coverage of a knowledge graph through crowdsourcing features built into a social networking service. In this setting, most participants are casual users, making only a few contributions, and do so incidentally in the course of using the service. Techniques that make assumptions about the matching of users to questions, or the number of answers per user or per question do not work well under such circumstances. We present an approach to model user trust when prior history is lacking, so that we can incorporate more new users’ contributions into crowdsourced decisions, and provide quicker feedback to new participants. Specifically, we present a logistic regression classifier for first-time contributions, and study the effect of prior knowledge about user demographics on this classifier using Facebook crowdsourcing datasets.
Facebook’s Places Graph makes 140 million locations available to developers for free

The available content includes business address, lat-long, hours, likes, check-ins, ratings, photos and more.

Greg Sterling on April 18, 2017 at 4:51 pm

https://www.theverge.com/2017/2/13/14581028/google-maps-location-list-share-social-network
Findings

• Crowdsourcing mechanism: gamification and reward system
• Place Information or description
• Contributor and Community
• Richness and Vandalism
• “un-official, but useful?” place names - New Paradigm for Geographical Names Authority
Gamification and reward system

<table>
<thead>
<tr>
<th>Facebook Place Editors</th>
<th>Google Local Guide</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Facebook Place Editors" /></td>
<td><img src="image2" alt="Google Local Guide" /></td>
</tr>
</tbody>
</table>
## Place Information or description

### Facebook Place Editors

<table>
<thead>
<tr>
<th>Informasi Umum</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nama</strong></td>
<td>The AMAROSSA Hotel, Bandung</td>
</tr>
<tr>
<td><strong>Kategori</strong></td>
<td>Penginapan - Hotel</td>
</tr>
<tr>
<td><strong>Label Halaman</strong></td>
<td>Sarankan label halaman</td>
</tr>
<tr>
<td><strong>Telepon</strong></td>
<td>+62 22 4222221</td>
</tr>
<tr>
<td><strong>Situs Web</strong></td>
<td><a href="http://www.amaroossahotel.com">www.amaroossahotel.com</a></td>
</tr>
<tr>
<td><strong>Email</strong></td>
<td>Sarankan alamat email</td>
</tr>
<tr>
<td><strong>Alamat</strong></td>
<td>Jalan Aceh 71, Kota Bandung 40115</td>
</tr>
</tbody>
</table>
| **Peta**       | ![Map](image)

### Google Local Guide

**Suggest an edit**

Place is permanently closed or has never existed

**Click information below to correct it**

- **Name**: Amaroossa Hotel Bandung
- **Address**: Jl. Aceh No. 71 A, Citarum, Bandung Wedan Citarum Bandung Wedan Kota Bandung, Jawa Barat 40115, Indonesia
- **Category**: Hotel
- **Location**: Marker is placed incorrectly on the map
- **Phone**: +62 22 4222221
- **Report on a different place**: Submit

Google will email you about the status of your edits. Learn more.
Crowd-based Place (Names) Information

<table>
<thead>
<tr>
<th>Facebook Place Editors</th>
<th>Google Local Guide</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Welcome and House Rules</strong></td>
<td><strong>You’re Helping Millions of People Get Around</strong></td>
</tr>
</tbody>
</table>

Welcome to the Facebook Places Editors group! This group is managed by the Facebook Editor team and we thank you for joining.

We ask that you:

- Please only use this group for discussions related to Places Editing. Links to our editing guides, our wiki & other important info can be found by reading our group description. If you would like to share personal photos or socialize with fellow editors, please use the Social Community group: https://www.facebook.com/groups/PlaceEditorsCommunity/
- Participate in a kind and collaborative way, and exercise respect and consideration while here. People who attack other members, block admins, or become disrespectful will be removed.
- Please do not post any spam. If you are reported to be abusing the group, you may be removed from the group.
- Use the group wall and tagging feature to get a hold of an admin, rather than reaching out via Private Messages.
- Avoid private messaging other members to demean, harass, or be unkind.

Last month, we challenged Local Guides to try answering three accessibility questions a day on Google Maps to help people with mobility issues. Today, we’re excited to reveal amazing progress.

- Nearly 7 million Local Guides joined the effort
- You added 51 million accessibility answers to over 12 million places globally
- More than 200 accessibility meet-ups were organized around the world

Watch the video series above to see how your incredible contributions impact real people. There are still many places missing information for people with wheelchairs, walkers, and strollers. Keep sharing to support mobility for all.
Contributor and Community

Facebook Place Editors

Hello Editors! I wanted to let you all know today is my last day admiring this group. It has been a pleasure being a part of this incredible community over the past four years. Please continue to tag Amber Foster for any questions or concerns with editing. Thank you for all the help you’ve provided one another and the feedback you’ve shared with our team. Most of all, thank you for helping the Facebook community connect to places all around the world. Cheers!

Google Local Guide

Teman teman Local Guide Indonesia pasti sudah tahu dong...
Contributor and Community

Facebook Place Editors

<table>
<thead>
<tr>
<th>Name</th>
<th>Score</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heryadi Saptono</td>
<td>21 pln</td>
<td></td>
</tr>
<tr>
<td>Limbo Restino</td>
<td>10 pln</td>
<td></td>
</tr>
<tr>
<td>Rohmat Hidayatuloh</td>
<td>17 pln</td>
<td></td>
</tr>
<tr>
<td>Budi</td>
<td>16 pln</td>
<td></td>
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<tr>
<td>Hendri Cahyono Wibowo</td>
<td>16 pln</td>
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<tr>
<td>Aj P Perdana</td>
<td>12 pln</td>
<td></td>
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<tr>
<td>Bremantyo Marjuki</td>
<td>8 pln</td>
<td></td>
</tr>
<tr>
<td>Yayan Baryaman</td>
<td>6 pln</td>
<td></td>
</tr>
</tbody>
</table>

Google Local Guide

Aji P Perdana - Niveau 2

22 punten

MEER INFORMATIE OVER PUNTEN

Het kan 24 uur duren voordat punten zijn geüpdatet.
Punten gelden voor een plaats, niet voor een individuele foto of een individueel antwoord.

- Reviews: 2
- Beoordelingen: 0
- Foto’s: 2
- Plaatsen Met Antwoorden: 0
- Toegevoegde Plaatsen: 0
- Bewerkingen: 0
- Feiten Gecontroleerd: 0
Richness and Vandalism of Place Names

Modeling People’s Place Naming Preferences in Location Sharing
Jialiu Lin, Guang Xiang, Jason I. Hong, Norman Sadeh
School of Computer Science, Carnegie Mellon University, PA, USA
(jialiu, guangx, jasonh, sadeh)@cs.cmu.edu

ABSTRACT
Most location sharing applications display people’s locations on a map. However, people use a rich variety of terms to refer to their locations, such as “home,” “Starbucks,” or “the bus stop near my house.” Our long-term goal is to create a system that can automatically generate appropriate place names based on real-time context and user preferences. As a first step, we analyze data from a two-week study involving 26 participants in two different cities, focusing on how people refer to places in location sharing. We derive a taxonomy of different place naming methods, and show that factors such as a person’s perceived familiarity with a place and the entropy of that place (i.e. the variety of people who visit it) strongly influence the way people refer to it when interacting with others. We also present a machine learning model for predicting how people name places. Using our data, this model is able to predict the place naming method people choose with an average accuracy higher than 65%.

Author Keywords
Location sharing, Location-based service, Location representation, Place naming

Richness and Vandalism of Place Names

Someone changed the name of Donald Trump’s transition headquarters, Trump Tower, to ‘Dump Tower’ on Saturday.
Developers: Facebook vs Google Places (Names) Information

Places Graph

Search for places, enabling place discovery, location sharing, and geo-tagging. Add location awareness to your app. Understand people’s current place, and access information about it, including photos and ratings.

Google Places API

Places APIs and Related Products

The Google Places APIs belong to the family of Google Maps APIs. Not sure which API you need? Try the API picker.

Google Places APIs

- **Google Places API for Android**: Connect your users with information about millions of places.
- **Google Places API for iOS**: Connect your users with information about millions of places.
- **Places Library in the Google Maps JavaScript API**: Up-to-date information about millions of locations.
- **Google Places API Web Service**: Up-to-date information about millions of locations.

Concepts

- **Place IDs**: Unique identifier for a place, supported in many APIs.
- **Place types**: Supported values for the `types` property.
Facebook V: Predicting Check Ins

Identify the correct place for check ins
1,342 teams - a year ago

Overview | Data | Kernels | Discussion | Leaderboard | Rules

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Overview

Description

Evaluation

Timeline

Work At Facebook

Ever wonder what it's like to work at Facebook? Facebook and Kaggle are launching a machine learning engineering competition for 2016. Trailblaze your way to the top of the leaderboard to earn an opportunity at interviewing for one of the 10+ open roles as a software engineer, working on world class machine learning problems.

The goal of this competition is to predict which place a person would like to check in to. For the purposes of this competition, Facebook created an artificial world consisting of more than 100,000 places located in a 10 km by 10 km square. For a given set of coordinates, your task is to return a ranked list of the most likely places. Data was fabricated to resemble location signals coming from mobile devices, giving you a flavor of what it takes to work with real data complicated by inaccurate and noisy values. Inconsistent and erroneous location data can disrupt experience for services like Facebook Check In.
Lesson learned

• Details description of place names information
• Review/editor procedure by voluntary people/ contributor
• How to engage and maintain with contributor within community
• Gamification, point rewards system
• How to engage with Community: online vs meetup
• Place names disambiguation, decision of place names to be displayed or approved? (Machine Learning, Natural Language Processing, etc.)